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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/726,397

12/02/2003

Stephane Poulin

LUP-107

5629

7590

03/07/2005

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EXAMINER

LE, DANG D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,397

Applicant(s)

POULIN ET AL.

Examiner

Dang D. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 6-25 is/are allowed.
6) ☒ Claim(s) 1-5, 28-32 is/are rejected.
7) ☒ Claim(s) 26 and 27 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/5/05 have been fully considered but they are not persuasive. Although the primary function of the bearing housing (7) of Yamane is not for conducting heat away from the stator, it can still be identified as a cooling device because it is used to dissipate heat from the stator. A fan, an aluminum heat sink used with rectifier in an alternator, and a radiator in a vehicle are cooling devices.

The fixing member (4f) of Yamane is a biasing member because the inner circumference of the stator (4) is a lot larger than the outer circumference of the cooling and supporting device (7). Without the biasing member (4f) biasing the stator (4) and the device (7), the stator (4) can not stay in place.

Regarding the Couture et al. reference, the recesses (36) and the projecting tongues (37) must bias each other through interference fit in order to retain the stator core in place.

Regarding the Elris et al. reference, the cylindrical internal surface is the side surface of the stator core (85) contacting the side surface of the cup (83). (It is not the inner circumferential surface of the stator core (85) and the outer circumferential surface of the cup (83).) It is noted that the sides surface also cylindrical because the stator core is circular. The aforementioned side surfaces are biased by the bolts (88).

Regarding the Nakano reference, the cooling device also includes the side plates (44 and 45) with return ports besides the jacket 80. The surfaces are biased by

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bolts (43a). It is noted that the cylindrical internal surface does not have to be the inner circumferential surface.

As a result, the rejections are still deemed proper and repeated hereinafter.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamane (6,005,312).

Regarding claims 1 and 30-32, Yamane shows a cooling device (7) for an internal stator of an electric machine, the stator including a substantially cylindrical cavity defining a substantially cylindrical internal surface, said cooling device comprising:

- A body defining an external substantially cylindrical contact surface, and
- A biasing element (4f) connected to said body;
- Wherein said biasing element (4f) is so configured and sized as to bias said contact surface of said body against the internal surface of the stator (4) when said cooling device is positioned inside the cavity.

4. Claims 1 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Couture et al. (5,438,228).

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Regarding claims 1 and 30-32, Couture et al. shows a cooling device (13, 34, Figure 2) for an internal stator of an electric machine, the stator including a substantially cylindrical cavity defining a substantially cylindrical internal surface, said cooling device comprising:

- A body (34) defining an external substantially cylindrical contact surface, and
- A biasing element (36) connected to said body;
- Wherein said biasing element (36) is so configured and sized as to bias said contact surface of said body against the internal surface of the stator (6) when said cooling device is positioned inside the cavity.

5. Claims 1 and 30-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Elris et al. (4814651).

Regarding claims 1 and 30-32, Elris et al. shows a cooling device (10, 4, Figure 1) for an internal stator of an electric machine, the stator including a substantially cylindrical cavity (within coil ends 32) defining a substantially cylindrical internal surface (side surface of core 30), said cooling device comprising:

- A body (4) defining an external substantially cylindrical contact surface (side surface with aperture 29), and
- A biasing element (bolts 88) connected to said body;
- Wherein said biasing element (88) is so configured and sized as to bias said contact surface of said body against the internal surface of the stator (30) when said cooling device is positioned inside the cavity.

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6. Claims 1-5 and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano (6114784)

Regarding claims 1-5 and 28-32, Nakano shows a cooling device (44, 45, Figure 2) for an internal stator (10) of an electric machine, the stator including a substantially cylindrical cavity (within coil ends 15) defining a substantially cylindrical internal (so called for being an internal member) surface (side surface of core 21), said cooling device comprising:

- A body (44, 45) defining an external (so called for being an external member substantially cylindrical contact surface (side surface with aperture 43b), and
- A biasing element (bolts 43a) connected to said body;
- Wherein said biasing element (43a) is so configured and sized as to bias said contact surface of said body against the internal surface of the stator (10) when said cooling device is positioned inside the cavity.

Allowable Subject Matter

7. Claims 6-25 are allowed.

8. Claims 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter: the record of prior art does not show a cooling device with a body being generally C-shaped and defines a gap, said gap being delimited by first and second

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opposed surfaces as claimed in claim 6 and a cooling device with a biasing element including a spring integral with said body as claimed in claim 26.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information on How to Contact USPTO

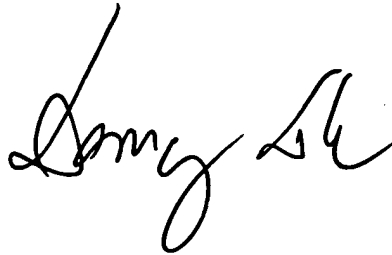
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

3/3/05

A handwritten signature in black ink, appearing to read 'Dangle', is positioned above the printed name.

DANGLE
PRIMARY EXAMINER